

Patent application of M. Harmon, K. Warner, B. Glaze, E. Ingham
for Compost Tea Machine

Page 18

Thus, the scope of the invention should be determined by the appended claims and their legal equivalents, rather than by the examples given.

Claims: We claim:

Claims For Tea Brewer

We claim an apparatus for simultaneously suspending, agitating, and entraining a compost nutrient water culture, comprising a beaker having a predetermined cross-sectional shape and containing said compost nutrient water culture, a vibrating perforated elastic membrane transversely covering the open bottom of said beaker, a holder positioned between said beaker and a base. Said base containing an air pump supplying air against said vibrating perforated elastic membrane, overcoming hydrostatic pressure of said compost nutrient water culture contained in said beaker and thereby sparging enough air through said perforated elastic membrane and into said compost nutrient water culture to maintain 6 mg per liter through out the brewing cycle. The top of said beaker is fitted with a lid and a strainer.

Means for simultaneously suspending, agitating, and entraining said compost, nutrient water culture enabling proper aeration of microorganisms, extraction of microorganisms, and multiplication of microorganisms.

Means for compression sealing of said perforated elastic membrane.

Patent application of M. Harmon, K. Warner, B. Glaze, E. Ingham

for Compost Tea Machine

Page 19

Means for quick connect/disconnect of said air supply, permitting instant disengagement between said base containing said air pump and said beaker.

2. The method of claim 1 wherein the combination of said vibrating perforated membrane, air bubble movement, and beaker shape, simultaneously suspends said compost nutrient water culture assuring full aeration above 6 mg per liter oxygen without settling of particles in lower portions of said beaker.

3. The method of claim 1 wherein the combination of said vibrating perforated membrane, air bubble movement, and said beaker shape, simultaneously agitates the compost, nutrient water culture extracting adhered microorganisms directly into said compost nutrient water culture.

4. The method of claim 1 wherein the combination of said vibrating perforated membrane, air bubble movement, and said beaker shape, simultaneously entrains said compost nutrient water culture, where by the reproduction of microorganisms is greatly enhanced.

5. The device of claim 1 Wherein the lower portion of said beaker having suitable male threads that are engaged by the corresponding female threads in said holder.

6. The device of claim 1 in which said vibrating perforated elastic membrane transversely covers the bottom of said beaker and is compression sealed by tightening said holder.

7. The device of claim 1 In which said holder is provided with multiple parallel splines protruding from an exterior circumference. Said multiple parallel splines mate positively with corresponding

Patent application of M. Harmon, K. Warner, B. Glaze, E. Ingham

for Compost Tea Machine

Page 20

tapered recess of said base. Upper centrally located portion of said holder having a raised portion acting as a seat.

8. The device of claim 1 in which said mammilated air duct protrudes into said holder passage forming an air tight seal between said "o" ring of said mammilated air duct and said holder passage, where by said beaker and said base may be quickly connected or disconnected and concurrently the air supply may be connected or disconnected.

9. The device of claim 6 Wherein said vibrating perforated elastic membrane having a preferred number, size, and pattern of perforations. Said vibrating perforated elastic membrane having a centrally located portion without perforations acting as a back flow valve when fitted against said seat.

10. The device of claim 1 in which said beaker, said holder, and said base easily engage and disengage, for the proper cleaning and convenient in home preparation of compost tea.

11. The device of claim 1 in which said lid having said strainer has a preferred mesh size.